

PATENT**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

in re application of: Field et al.

Attorney Docket No.: SUN1P252/P4198

Application No.: 09/540,576

Examiner: Kiss, Eric B.

Filed: February 24, 2000

Group: 2122

Title: DEBUGGER PROTOCOL GENERATOR

DECLARATION UNDER 37 CFR § 1.132

Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Robert Field, declare the following:

1. I am one of the inventors of the invention set forth in the above referenced application.
2. I gave a presentation entitled "The New Java™ Platform Debugger Architecture," on March 26, 1998, at the Moscone Convention Center in San Francisco.
3. I understand that the Gordon Hirsch, the other inventor of the invention set forth in the above referenced application, also participated in the presentation entitled "The New Java™ Platform Debugger Architecture," on March 26, 1998, at the Moscone Convention Center in San Francisco.
4. I was present during the entire presentation entitled "The New Java™ Platform Architecture," on March 26, 1998, at the Moscone Convention Center in San Francisco, on March 26, 1998.

5. I have reviewed the claimed invention of the above-identified application (claims 20 and 24-32).
6. I earnestly believe that, among other things, the claimed features relating to "automatically generating the front and back-end of the debugger program portions based on the parsing of a formal specification" (see, for example claim 20) were NOT publicly disclosed or otherwise made available to the public during the presentation entitled "The New Java™ Platform Architecture," on March 26, 1998, at the Moscone Convention Center in San Francisco.
7. I have reviewed the engineering documents relating to the May 1998 "Early access" of the Java Platform Debugger Architecture (Jbug).
8. Based on my review of the engineering documents relating to the May 1998 "Early access" of the Java Platform Debugger Architecture (Jbug), I earnestly believe that the May 1998 "Early access" of the Java Platform Debugger Architecture (Jbug), among other things, did NOT include the claimed features of automatically generating the front and back-end of the debugger program portions based on the parsing of a formal specification.
9. I have reviewed the provisional application 60/145, 136, filed July 21, 1999.
10. I understand that the provisional application 60/145, 136, filed July 21, 1999 includes a section entitled the "changes since early access" (a copy of which is attached herein).
11. Based on my review of the provisional application 60/145, 136, filed July 21, 1999, I am further convinced that the May 1998 "Early access" of the Java Platform Debugger Architecture (Jbug), among other things, did NOT include the claimed features relating to "automatically generating the front and back-end of the debugger program portions based on the parsing of a formal specification."

12. I have reviewed the engineering documents relating to the Beta 1 testing (December 1998) and Beta 2 testing (March 20, 1999) development period of the Java Debugger Architecture (Jbug).

13. I earnestly believe that both the Beta 1 (December 1998) and Beta 2 (March 20, 1999) testing of the Java Platform Debugger Architecture (Jbug) were experimental test releases to solicit input from the testers.

14. I earnestly believe that input was solicited from the testers during the Beta 1 and Beta 2 test periods and modifications were continued to be made to the Java Platform Debugger Architecture (Jbug) software based on the input received during the Beta testing periods.

15. I have reviewed the Jbug Beta Software License (a copy of which is attached herein).

16. I earnestly believe that both Beta 1 and Beta 2 test releases of the Jbug test software were performed under the Jbug Beta Software License for a sixty (60) day period (please see, Jbug-beta Software License, section 1, BETA TESTING PERIOD) in order to fix any defects or deficiencies that were present in the experimental version of the Java Platform Debugger Architecture (Jbug).

17. I understand that Jbug Beta Software License includes a non-disclosure agreement that strictly forbids disclosure of confidential information by the testers to any third party (Jbug-beta Software License, section 3).

18. I have no reason to believe that the non-disclosure agreement of the Jbug Beta Software License was violated by any of the testers during the Beta 1 or Beta 2 testing.

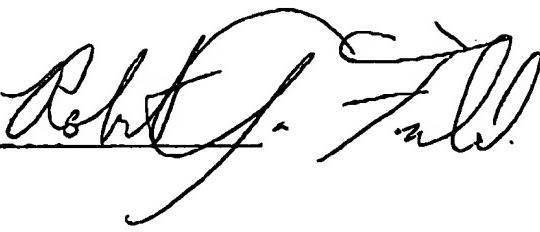
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that these statements are made with the knowledge that willful false statements and the like so made are

punishable by fine or imprisonment, or both (under Section 1001 of Title 18 of the United States Code), and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date

Oct 14, 2004

Robert Field:

A handwritten signature in black ink, appearing to read "Robert J. Field".

Jbug Beta Software License

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE "JBUG" DEBUGGER INTERFACES BETA SOFTWARE AND THE ACCOMPANYING DOCUMENTATION INCLUDING AUTHORIZED COPIES OF EACH (THE "SOFTWARE") TO LICENSEE ONLY ON THE CONDITION THAT LICENSEE ACCEPTS ALL OF THE TERMS IN THIS AGREEMENT.

PLEASE READ THE TERMS CAREFULLY BEFORE CLICKING ON THE "ACCEPT" BUTTON. BY CLICK- ING ON THE "ACCEPT" BUTTON, LICENSEE ACKNOWLEDGES THAT LICENSEE HAS READ AND UNDERSTANDS THIS AGREEMENT AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

IF LICENSEE DOES NOT ACCEPT THESE LICENSE TERMS, SUN DOES NOT GRANT ANY LICENSE TO THE SOFTWARE, AND LICENSEE SHOULD CLICK ON THE "REJECT" BUTTON TO EXIT THIS PAGE.

1. BETA TESTING PERIOD

Licensee may use the Software for a period of sixty (60) days from the date Licensee downloads the Software from a Sun website (the "Testing Period"). On the sixty-first (61 st.) day, Licensee must immediately cease use of and destroy the Software or, upon request from Sun, return the Software to Sun.

2. LICENSE GRANT**(A) License Rights**

Licensee is granted a non-exclusive and non-transferable license to download, install and internally use the Software for beta testing and evaluation purposes only. Licensee may make one copy of the Software only for archival purposes in support of Licensee's use of the Software, provided that Licensee reproduce all copyright and other proprietary notices that are on the original copy of the Software.

(B) License Restrictions

The Software is licensed to Licensee only under the terms of this Agreement, and Sun reserves all rights not expressly granted to Licensee. Licensee may not use, copy, modify, or transfer the Software, or any copy

thereof, except as expressly provided for in this Agreement. Except with respect to any sample code provided in source code form and except as otherwise provided by law for purposes of decompilation of the Software solely for interoperability, Licensee may not reverse engineer, disassemble, decompile, or translate the Software, or otherwise attempt to derive the source code of the Software. Licensee may not rent, lease, loan, sell, or distribute the Software, or any part of the Software. No right, title, or interest in or to any trademarks, service marks, or trade names of Sun or Sun's licensors is granted hereunder.

(C) Acknowledgment that Software is Experimental

Licensee acknowledges that Software furnished hereunder is experimental and may have defects or deficiencies which cannot or will not be corrected by Sun and that Sun is under no obligation to release the Software as a product. Licensee will release and discharge Sun from any liability from any claims that any product released by Sun is incompatible with the Software. Further, Licensee will defend and indemnify Sun from any claims made by Licensee's customers that are based on incompatibility between the Software and any products released by Licensee. Licensee will have sole responsibility for the adequate protection and backup of Licensee's data and/or equipment used with the Software.

(D) Aircraft Product and Nuclear Applications Restriction

SOFTWARE IS NOT DESIGNED OR INTENDED FOR USE IN ON-LINE CONTROL OF AIRCRAFT, AIR TRAFFIC, AIRCRAFT NAVIGATION OR AIRCRAFT COMMUNICATIONS; OR IN THE DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE OF ANY NUCLEAR FACILITY. SUN DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR SUCH USES. LICENSEE REPRESENTS AND WARRANTS THAT IT WILL NOT USE THE SOFTWARE FOR SUCH PURPOSES.

3. CONFIDENTIALITY

(A) The Software is protected by United States copyright law and international treaty and unauthorized re-production or distribution is subject to civil and criminal penalties. Sun's proprietary and confidential

information includes: (i) the Software (including its nature and existence), and any test results, error data, or other reports made by Licensee in connection with Licensee's use and evaluation of the Software, including all reports and test results described below in paragraph 4; (ii) any and all other information which is disclosed by Sun to Licensee orally, electronically, visually, or in a document or other tangible form which is either identified as or should be reasonably understood to be confidential and/or proprietary; and, (iii) any notes, extracts, analysis, or materials prepared by Licensee which are copies of or derivative works of Sun's proprietary or confidential information from which the substance of Confidential Information can be inferred or otherwise understood (the "Confidential Information").

(B) Confidential Information does not include information received from Sun which Licensee can clearly establish by written evidence that: (i) is or became known by Licensee without an obligation to maintain its confidentiality; (ii) is or became generally known to the public through no act or omission of Licensee; or, (iii) is independently developed by Licensee without the use of the information described above in paragraph (A).

(C) Licensee agrees not to disclose Confidential Information to any third party and will protect and treat all Confidential Information with the same degree of care as Licensee uses to protect Licensee's own confidential information but in no event less than reasonable care. Except as otherwise expressly provided in this Agreement, Licensee will not use, make or have made any copies of Confidential Information, in whole or in part, without the prior written authorization of Sun. Confidential Information will only be disclosed to and used by Licensee's employees with a need to have access for the purposes of this Agreement. Licensee agrees to notify and inform such employees of Licensee's limitations, duties, and obligations regarding use, access to, and nondisclosure of Confidential Information. Licensee may disclose Confidential Information pursuant to statute, regulation, or order of a court of competent jurisdiction, provided that Licensee provide Sun with prior notice and cooperate with Sun in taking appropriate protective measures.

(D) Licensee agrees that any breach or threat of breach of this Agreement will result

in irreparable harm to Sun for which damages would not be an adequate remedy and, therefore, in addition to its rights and remedies otherwise available at law, including without limitation the recovery of damages for breach of this Agreement, Sun shall be entitled to equitable relief, including both temporary and permanent injunction, to prevent any unauthorized use or disclosure, and to such other and further equitable relief as the court may deem proper under the circumstances.

4. Testing and reporting REQUIREMENTS

Licensee agrees to evaluate and test the Software. Any comments concerning such evaluation and testing which Licensee wishes to provide to Sun shall be sent via email to java-debugger@javasoft.com. Licensee shall treat any information it learns from its evaluation and testing of the Software as Confidential Information of Sun pursuant to Section 3 above.

5. TERM, TERMINATION AND SURVIVAL

- (A) The Agreement is effective until expiration of the Testing Period, unless sooner terminated as provided for herein.
- (B) Licensee may terminate this Agreement at any time by destroying all copies of the Software.
- (C) This Agreement will immediately terminate without notice if Licensee fails to comply with any obligation of this Agreement.
- (D) Upon termination, Licensee must immediately cease use of and destroy the Software or, upon request from Sun, return the Software to Sun.
- (E) The provisions set forth in paragraphs 2(B), 3, 8, 9, 10, and 11 will survive termination or expiration of this Agreement.

6. NO WARRANTY

THE SOFTWARE IS PROVIDED TO LICENSEE "AS IS". ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH

DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

7. MAINTENANCE AND SUPPORT

Sun has no obligation to provide maintenance, support, updates or error corrections for the Software under this Agreement. In the event Sun, in its sole discretion, provides updates to Licensee, Licensee agrees to install and update the Software with such updates within fifteen (15) days from notification by Sun of the updates availability. Updates will be deemed Software hereunder and unless subject to terms of a specific update license, will be furnished to Licensee under the terms of this Agreement.

8. LIMITATION OF DAMAGES

TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, SUN'S AGGREGATE LIABILITY TO LICENSEE OR TO ANY THIRD PARTY FOR CLAIMS RELATING TO THIS AGREEMENT, WHETHER FOR BREACH OR IN TORT, WILL BE LIMITED TO THE FEES PAID BY LICENSEE FOR SOFTWARE WHICH IS THE SUBJECT MATTER OF THE CLAIMS. IN NO EVENT WILL SUN BE LIABLE FOR ANY INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGE IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT (INCLUDING LOSS OF BUSINESS, REVENUE, PROFITS, USE, DATA OR OTHER ECONOMIC ADVANTAGE), HOWEVER IT ARISES, WHETHER FOR BREACH OR IN TORT, EVEN IF SUN HAS BEEN PREVIOUSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. LIABILITY FOR DAMAGES WILL BE LIMITED AND EXCLUDED, EVEN IF ANY EXCLUSIVE REMEDY PROVIDED FOR IN THIS AGREEMENT FAILS OF ITS ESSENTIAL PURPOSE.

9. GOVERNMENT USER

Rights in Data: If procured by, or provided to, the U.S. Government, use, duplication, or disclosure of technical data is subject to restrictions as set forth in FAR 52.227-14(g)(2), Rights in Data-General (June 1987); and for computer software and computer software documentation, FAR 52-227-19, Commercial Computer Software-Restricted Rights (June 1987). However, if under DOD, use, duplication, or disclosure of technical data is subject to DFARS 252.227-7015(b), Technical Data-Commercial Items (June 1995); and for computer software and computer software documentation, as specified in the license under which the computer software was procured pursuant to DFARS 227.7202-3(a).

Licensee shall not provide Software nor technical data to any third party, including the U.S. Government, unless such third party accepts the same restrictions. Licensee is responsible for ensuring that proper notice is given to all such third parties and that the Software and technical data are properly marked.

10. EXPORT LAW

Licensee acknowledges and agrees that this Software and/or technology is subject to the U.S. Export Administration Laws and Regulations. Diversion of such Software and/or technology contrary to U.S. law is prohibited. Licensee agrees that none of this Software and/or technology, nor any direct product therefrom, is being or will be acquired for, shipped, transferred, or reexported, directly or indirectly, to proscribed or embargoed countries or their nationals, nor be used for nuclear activities, chemical biological weapons, or missile projects unless authorized by the U.S. Government. Proscribed countries are set forth in the U.S. Export Administration Regulations. Countries subject to U.S. embargo are: Cuba, Iran, Iraq, Libya, North Korea, Syria, and the Sudan. This list is subject to change without further notice from Sun, and Licensee must comply with the list as it exists in fact. Licensee certifies that it is not on the U.S. Department of Commerce's Denied Persons List or affiliated lists or on the U.S. Department of Treasury's Specially Designated Nationals List. Licensee agrees to comply strictly with all U.S. export laws and assumes sole responsibility for obtaining licenses to export or reexport as may be required.

Licensee is responsible for complying with any applicable local laws and regulations, including but not limited to, the export and import laws and regulations of other countries.

11. GOVERNING LAW, JURISDICTION AND VENUE

Any action related to this Agreement shall be governed by California law and controlling U.S. federal law, and choice of law rules of any jurisdiction shall not apply. The parties agree that any action shall be brought in the United States District Court for the Northern District of California or the California Superior Court for the County of Santa Clara, as applicable, and the parties

hereby submit exclusively to the personal jurisdiction and venue of the United States District Court for the Northern District of California and the California Superior Court of the county of Santa Clara.

12. NO ASSIGNMENT

Neither party may assign or otherwise transfer any of its rights or obligations under this Agreement, without the prior written consent of the other party, except that Sun may assign its right to payment and may assign this Agreement to an affiliated company.

13. OFFICIAL LANGUAGE

The official text of this Agreement is in the English language and any interpretation or construction of this Agreement will be based thereon. In the event that this Agreement or any documents or notices related to it are translated into any other language, the English language version will control.

14. ENTIRE AGREEMENT

This Agreement is the parties' entire agreement relating to the Software. It supersedes all prior or contemporaneous oral or written communications, proposals, warranties, and representations with respect to its subject matter, and following Licensee's acceptance of this license by clicking on the "Accept" Button, will prevail over any conflicting or additional terms of any quote, order, acknowledgment, or any other communications by or between the parties. No modification to this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

- Fixed bug in counted events and added checks for illegal count values.
- Fixed target VM crash after debugger attach fails.
- Worked around questionable line number info generated by javac.
- Fixed concurrency bugs in ObjectReference.enableCollection and disableCollection.
- Fixed hang in target VM when started with suspend=n
- Fixed bugs in several operations when attempted with subclasses ObjectReference.
- Fixed serious synchronization bug in the socket transport which could result in corrupted packets.
- Fixed missing exception for invalid threads in ObjectReference.invokeMethod.
- Added missing constructor to VMDisconnectedException
- Fixed rare crash when cancelling certain step event requests.
- Fixed target VM crash when attempting a thread operation on a zombie thread.
- Fixed incorrect behavior in the timed version of EventQueue.waitEvent
- Fixed NullPointerException in setting local variables to null and an internal error when setting locals to objects of certain common types.
- Fixed incorrectly reported step depth and size for step event requests
- Fixed hang if a JDI method is called as the target VM is exiting.
- Fixed missing exception on certain out-of-bounds conditions on array element gets and sets.
- Fixed target VM crash sometime after a ReferenceType.classObject call.
- Underlying event handling infrastructure of example GUI debugger overhauled: Uses EventSets, handles Watchpoints, etc.

Changes since Early Access

Some of the changes since Early Access (in no particular order):

- Method invocation and instance creation.
- Revamp of reference management.
- All JDI methods now implemented.
- Add type checking on Object values.
- Much error handling clean-up.
- Added example GUI debugger.
- JDWP now formally specified and mechanically generated.
- Add EventRequests, which control event propagation.
- Move stepping to EventRequest model.
- Divide JDI into five packages.
- Add pluggable Transports and Connects.
- Added VirtualMachineManager to JDI to manage connections to multiple target VMs
- Add attaching and Just-In-Time connections.
- Remove VM interrupted model, replace with suspend/resume model.
- Add VM disconnected event and exception.
- Remove all dependencies on Sun VM interface.
- Add VoidValue and VoidType to JDI.
- Add VirtualMachine.classpath() and bootclasspath() to JDI.
- Add VirtualMachine.exit() to JDI.
- Add VMStartEvent to the JDI.
- Renamed ThreadEndEvent to ThreadDeathEvent for consistency.
- JDI exceptions overhaul
- JDI Location now consistently only in executable code.
- Changed back end library name from jdi to jdwp. Now -runjdwp: ...
- Removed run command from jdb. Auto started. Use "cont".